E52 PTI

-User's manual V1.00-

Overview

E52 PTI can work depending on three different modes, Administrator, Locked and Limited, swapping in between each mode is quite an easy handling and will be explained in the programming part. Here is a little overview of each mode uses:

✓ *Administrator :*

This mode matches two needs.
In this mode it's possible to set up the lone worker module behavior.
The administrator mode allows to make use of any phone's capabilities without any restriction.
In this mode PTI function is switchable to off (see « Hands on » part).

✓ *Locked :*

The phone lockable at will in order to limit its use to its purely functional use aspect in the security framework.
The allowed functionalities in locked mode are:

-Access to read-only contacts to make use of the preprogrammed numbers
-Free dialing via front keypad
-Manual alert / verticality loss handling / Locator
-Push-to-Talk only if programmed and validated by your network provider
-Keypad locking/unlocking
-Limited calls by PIN2 possible

The mainly locked functions are :

-GPRS (connection, downloadings…)
-SMS/MMS
-Camera
-Media keys
-MP3 walkman
-Menus navigating (games or sensitive applications…)
-Elements deletion or editing

✓ *Limited :*

The phone is locked in its most sensitive applications, but keeps a certain level of access to multimedia features via the availability of the shortcuts on the central key.
This can be used to :

-Send SMS
-Take pictures
-Launch third-party applications

✓ Volunteer alert :

Press on the lateral manual alarm button (the « volume » ones) located on the upper right side of the handheld for at least 3 seconds to transmit a cascade of silent alarms that you would have previously programmed (see Programming part).
If vibrator feature is activated on the current profile, the phone will vibrate to confirm that the manual alert has been detected. A alert SMS is also sent if configured.
The calls chain or « cascade » from 1 to 10 numbers maximum performs a single cycle, then the phone takes back its normal behaviour.

Appel = Call / Alarme manuelle = Silent Alert / Retour a la normale = back to idle state

The loop chain is so-called « smart », each phonecall is separated from the next one by a 20 seconds silence delay on hang-up.

✓ Automatic ManDown Alert / Verticality Alert :

If the GSM PTI stays inclinated for more than 45° (blue area), i.e. if you fall, the phone vibrates after 30s, then a discontinuous siren, sounding like an anvil noise, will be played after 40 seconds, a messagebox appears on the display to notify the Verticality problem and the phone vibrates in the two ways. You can modify the timers in settings.
After 58 seconds, mixed to the siren, a voice tells you that it only remains 10s before the alarm phonecalls.
After 70 seconds, if the GSM PTI handheld had not been set in vertical position, the system goes in the real and firm alarm process. An alert SMS is then sent if set. The phonecalls loop gets performed, the programmed numbers will be called in cascade (20s between each call after hang-up, from 1 to 10 numbers) then the loop restarts after 180 seconds.
Unlike the Volunteer Alert, the handsfree mode is activated automatically in order to ease the communication in a case of physical distress.
(see Programming part)
Use example : falling risks, guard tours.

Appel = Call / Alarme manuelle = Silent Alert / Retour a la normale = back to idle state

The loop chain is so-called « smart », each phonecall is separated from the next one by a 20 seconds silence delay on hang-up, then 180s of loud siren at the end of the chain.
In this mode, as soon as the receiver picks the phone, the handsfree mode starts greatly increasing the microphone sensitivity and loudspeaker volume.

✓ Automatic Movement loss Alert :

If the GSM PTI stays still, i.e. if you faint, a discontinuous siren, sounding like an anvil noise, will be played after 1 to 5 minutes, depending on settings.
After 18 seconds of local alarm, mixed to the siren, a voice tells you that it only remains 10s before the alarm phonecalls.
After 30 seconds, if the GSM PTI handheld had not been moved for a variation close to 10°, the system goes in the real and firm alarm process. An alert SMS is then sent if set. The phonecalls loop gets performed, the programmed numbers will be called in cascade (20s between each call after hang-up, from 1 to 10 numbers) then the loop restarts after 180 seconds.
Unlike the Volunteer Alert, the handsfree mode is activated automatically in order to ease the communication in a case of physical distress.
(see Programming part)

Use example : vertical falling risks, sat work
The scenario scheme is the same than the ManDown one.
Unlike the Volunteer Alert, the handsfree mode is activated automatically in order to ease the communication in a case of physical distress.

✓ ***<u>Alarme PTI automatique Perte de verticalité & Absence de mouvement :</u>***

This mode is the perfect mix of the two above, for angle values under 45°(green area), the motion loss detection takes advantage on verticality sensing.
For values above 45°(blue area), ManDown detection takes the control of the alarm handling, since a injuried person on the on the floor isn't always a still one.

✓ ***<u>Lone Worker Protection organs :</u>***
The functioning of the 3D sensor is resumed here :

The motion detection has not been represented here for legibility purposes. It obviously covers a 180° disc on this plan.

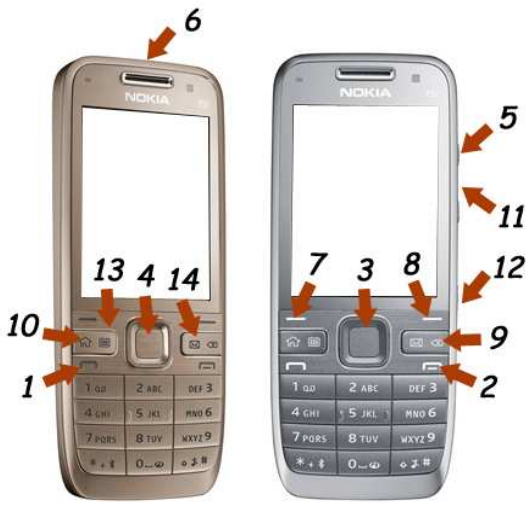
BEWARE ! When charger is connected (mini-USB plug), those organs stand idle until return to normal state in order to ease the GSM charging which can then lies flat on a table.
It's the exact same behaviour when a phonecall is established to handle the phone as wanted.

BEWARE ! It's strongly advised to use a armband type casing when ones wants to use motion loss detection in an efficient and convenient way. The E12 is a compact device that gathers numerous electronic organs able to modify the user's behaviour perception by the handheld.
We had to develop an exclusive algorithm able to discard those perturbations at the cost of a functioning Needing irregular and erratic movements much more noticable at the arm level.

The E52 PTI is an extremely complete handheld and cannot be resumed in few paragraphs, for each advanced feature such as Push-to-Talk of connectivity one, please refer to genuine manufacturer manual.

Nevertheless for a commun use, its ergonomy allows user to gather those principles :

BEWARE ! To Guarantee an optimal lifetime of your device, espacially for an intense use, it's highly recommended to use a covering casing such as the « Krusell » one or other brand.



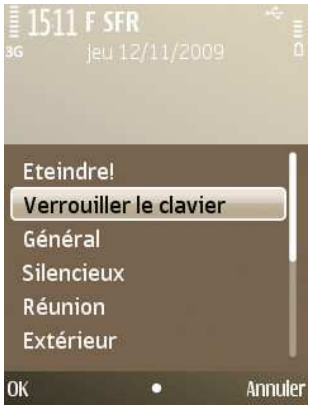
✓ ***Answering, Hanging up, Validating a number :***
Those functions commonly dedicated to the green (1) and red (2) keys on GSM are, on the E52, located on the two pictogams on each side of the main display.

✓ ***Directional cross :***
The big square in the center of the device (3) allows you to navigate in the menu in Administrator mode or only in contacts in Locked mode.
The center key (4) is an « OK » button only in Administrator mode, in Locked mode, this key forces a return to main screen in order to block the changes this key can be accessed in Administrator mode.

✓ ***Softkeys :***
-The Volume (5) and Record (11) keys have been tranformed into a Volunteer Alarm button when ManDown feature is enabled, otherwise it can modify sound volume while in communication.
-The On/Off (6) allows with a short push to change preset profile and overall in Locked this is the only way to lock the keypad. A long keypress starts or shuts the phone down.
-The Left Screen (7) key matches its label on screen, available in Administrator mode only..
-The Right Screen (8) key matches its label on screen, in either mode.
-The C (9) key available in Administrator mode only allows to delete an item (contact, software, picture…).
-The Menu (10) key available in Administrator mode only allows to open the phone's menu but also to temporarily disable ManDown feature on the phone.
-The Camera (12) key available in Administrator mode only allows to take pictures.
-The Calendar (13) key available in Administrator mode only to place notes and tasks in the calendar.
-The Mail (14) key key available in Administrator mode only to handle a mailbox you'd have set previously on the phone.

✓ Lock/Unlock the keypad :

To lock the keypad, quickly press on the On/Off (6) switch, go to « Lock keypad » and then validate.
To activate the keypad, press Left Screen (7) and then Right Screen (8).



✓ Temporarily disable the ManDown system :

In Administrator mode : make a long keypress on the Menu (10) key, a list appears. Go to the process named DATI with the directional cross and press C (9) key then Yes (7) softkey.

BEWARE ! The ManDow system is enabled by default on each restart for obvious security purposes, it must be disabled manually each time.

✓ Send a volunteer silent alert :

This feature is available is any mode, even in charge, it allows the phone to send a silent call, GPS located or not, depending on the configuration following.
Press 3 seconds on at least 2 keys the Volume (5) buttons upon the GSM, even if the keypad is locked.

✓ Perform a call from the contacts :

The manipulation is really simple, press the Screen key (right only in Locked mode), the contact database appears. Navigate in the contacts to the wanted name and press the key (1).

✓ Battery casing :

Remove the rear trap, there is a little lock you can handle with your nail to do so.
Tap gently the phone in your hand, the battery will pop out.

✓ SIM card slot :

After removing the battery, make the SIM card slide under the steel frame.

In order to simplify programming process of the E52 PTI handheld, we conserved the former way to make It done, common on many GSM PTI. Every parameters are established in the phonebook.

✓ *Phone numbers :*

There is many methods to perform programming.

In Administrator mode :
-Copying contacts from preprogrammed SIM card.
-Manually by adding/editing contact using handheld's keypad.
-Using the official Nokia PC Suite freely downloadable on Nokia website.

In Limited mode :
-Using the official Nokia PC Suite freely downloadable on Nokia website.

The manual and software will be then espescially explained.

✓ *Structure of the programming :*

Prior to everything, it's important to understand how the software layer of the ManDown system will handle the given informations :

The software part of the ManDown system will, on each restart of the phone, scans the the contact database of the GSM in order to set its own configration, this fact explains that every single change implies a restart to be interpreted.

It exists for each contact in the contact database of the phone different records or details matching a specific information.
The software will only take care of two records, the « Job Title » detail and the « Business Phone » detail. The first one will contain what we want the contact to do (its job by extension) and the second one will match the target phone number.

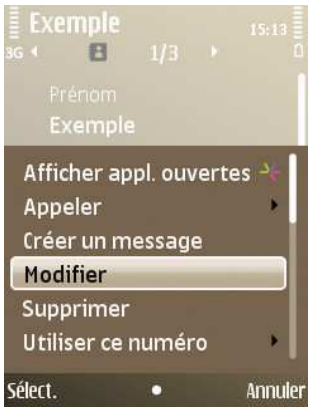
✓ *First time programming an emergency call :*

-Manual method-

In Administrator mode (see a bit further)
Be sure to start from the phone desktop, the basic screen
Go to Contacts via one of the two Screen softkey

The contact database screen appears
Choose a random contact, the name does not matter, it's just a label which can simplify the programming (i.e. Choose Manager)

Here the contact named « 1 » is chosen by default
Every records could be filled as you wish but the « Job title » and the « Tel. (business) » ones
In the « Job title » record, enter « Vocal1 » wich means that this contact will be called at first and vocal-wise
In the Tel. (business) record, enter the target phone number



If the « Job » or « Phone (fields) » are missing, proceed as following :
Press on Option then Edit

Select Add detail then the missing field
The field must be now here and editable

Reboot the phone, the PTI software layer is now programmed with 1 alert number and is fully functional.

<u>-Software method-</u>

It's the only method available in Limited mode, the main asset of this method is to easily duplicate configuration in between phones

First of all, download and install Nokia PC Suite software on the official Nokia website

Unpack the USB cable provided with the phone and plug PC side only for the moment

As your computer restarts, follow the instructions displayed to configurate the cable connection

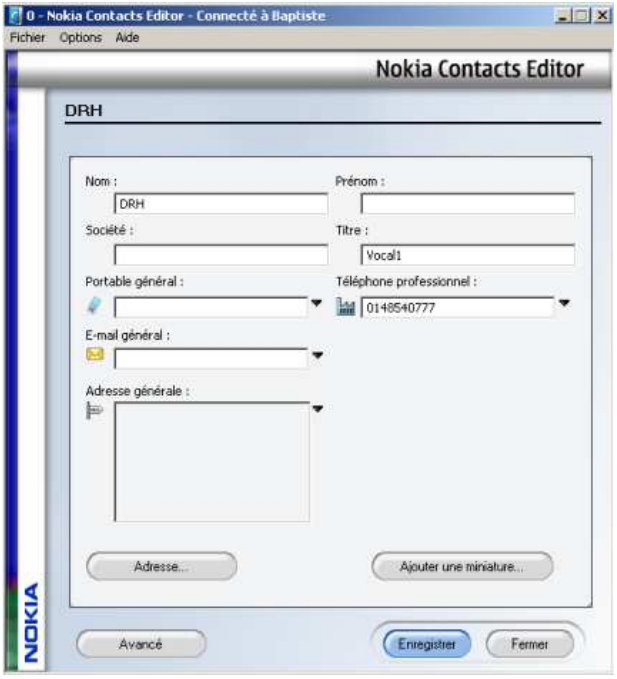
Once the cable is plugged to the phone, the software will ask to be installed, accept then

This done, you only need to plug the phone using the PC Suite profile to gain access to this interface :

Nokia PC Suite
File Web Settings Help
N82
Drag-and-drop content here
Browse phone and PC contents and transfer files between phone and PC.

Synchronize the phone (computer will then gather contacts informations) via the dedicated proper icon and then go to Contacts.

Modify or add a contact via this form :



Note here that « Titre » matches « Job »
And professional phone to « Tel. (business) »

Programming becomes then pretty obvious and is similar to the one you can manually perform on device keypad.

Save

It's important to notice that the fields are not case-sensitive, meaning « Vocal2 » equals to « vocaL2 »

Directly unplug the USB cable, shutdown and switch on the phone, PTI layer is then perfectly programmed with 1 alarm call on alert.

✓ ***Program the other alarm numbers :***

Do the exact same manipulation incrementing « Vocal# » each time for every # starting from 1 to 10.
The very only thing to care is that the indicators must be continuous.
A configuration such as Vocal1,Vocal2,Vocal4 will provoke a loop on dialing numbers after Vocal2, never making use of the number flaged with Vocal4 that will then be discarded.

✓ *GPS features :*

The GPS features depends on the integrated antenna configuration and/or a Bluetooth antenna (in example Nokia LD-3W) linked to the phone in range.
To access GPS' parameters, the phone must not be in limited or blocked mode to modify the configuration.

We will then verify if the GPS is well configured.

First of all, please go to Tools via Menu key.
Select « Parameters » using the big directional cross and the central key.

Access to the general parameters, then positioning.

Press on « positioning method » in order to defined the desired features to be used.
Activate « Bluetooth GPS » after having configurated a Bluetooth GPS antenna if desired.
Activate « Assisted GPS » to greatly enhance GPS time to fix making short 3G connexions .
Activate « Integrated GPS » to use internal antenna.
Activate « Defined by network » to leave the phone choose on its own the best method among th validated ones above.

GPS feature is then properly configurated, it only remains the SMS receiver to configurate following the next section, part called « Smsgps » or « Smsgps+ ».

✓ *SMS features :*

The E52 PTI GPS handheld handles SMS following 3 principles :
-It's able to send a geolocated (or not) SMS depending on your settings.
-It's able to receive particular SMS matching standards on acknowledge its alarm state or to silently send back its actual GPS position.
-It's able to manage a fully automated maintenance of it's SMS files in order to maintain a clear and uptodate historic and overall to avoid memory overloading which would hinder any future use. The software will then delete the oldest messages over 50 in inbox and 20 in the oher ones (tosend, drafts…).

-Send a SMS-

The E52 PTI GPS handheld can send an unique SMS for every single new alarm on the phone, verticality, movement or volunteer.

Please not that only one SMS is available, if the SMS configuration has to be changed, mind to delete the former one or directly modify it.

-Sms - Is the most simple configuration for SMS sending, it does not imply any noticable increase in power consumption and does not requiers any GPS or Bluetooth feature to be configured.
It allows to send for every new alert a SMS predefined « in clear » such as « VERTICALITY ALARM » or « MOTION ALARM » or « VOLUNTEER ALARM » to a receiver set as following :

1. ***Please see « Program ones first alert number : », « Manual method » section.***
2. ***Select a brand new contact.***
3. ***In the job field, in place of « Vocal1 », enter « Sms » meaning that this contact will receive the above described SMS for every single PTI alarm and location data for every single request.***

TIP : If the SMS is sent to a regular line, not GSM, depending on operator, i twill be interpreted by the robotic voice, making it a vocal alert.

-Smsgps - Is the GPS configuration for SMS sending, it implies a GPS connection try that tends to reduce handheld's autonomy giving a rough 15-20h remaining power with original battery using internal GPS antenna. It requiers the GPS configuration described as above. If the Bluetooth feature is disabled manually and configured as GPS location method, the software will ask for it to be activated.
It allows to send for any new alert a SMS matching survey center standards protocols :
?>EMR_00/00/00_00:00:00_00/00/00_00:00:00_100%_E000.00.00,0_N00.00.00,0_0KM/H_0DEG_0M_0_0_0

1. ***Please see « Program ones first alert number : », « Manual method » section.***
2. ***Select a brand new contact.***
3. ***In the job field, in place of « Vocal1 », enter « Smsgps » meaning that this contact will receive the above described SMS for every single PTI alarm and location data for every single request.***

-Smsgps+ - Is the GPS configuration for SMS sending, it implies a GPS connection try that tends to reduce handheld's autonomy giving a rough 15-20h remaining power with original battery using internal GPS antenna.
This configuration enhance the GPS feature to allow ponctual, discreet, location queries E52 PTI GPS.

It requiers the GPS configuration described above. If Bluetooth feature is manually desactivated and set as GPS medium, the software will ask for it to be enabled.

This configuration allows to send for every new alert a SMS to the actual survey centers' protocols :

?>EMR_00/00/00_00:00:00_00/00/00_00:00:00_100%_E000.00.00,0_N00.00.00,0_0KM/H_0DEG_0M_0_0_0

Or

!EMG_01/01_emer_100%_gps_1_N00.00.00,0_E000.00.00,0_00.00.0000_00:00:00_000km/h_000deg

It allow to send for every new location request a SMS to the actual survey centers' protocols :

?>POS_00/00/00_00:00:00_00/00/00_00:00:00_100%_E000.00.00,0_N00.00.00,0_0KM/H_0DEG_0M_0_0_0

Or

!LOC_01/01_norm_100%_gps_1_N00.00.00,0_E000.00.00,0_00.00.0000_00:00:00_000km/h_000deg

1- *Please see « Program ones first alert number : », « Manual method » section.*
2- *Select a brand new contact.*
3- *In the job field, in place of « Vocal1 », enter « Smsgps+ » meaning that this contact will receive the above described SMS for every single PTI alarm and location data for every single request.*

-Receiving a SMS-

The E52 GPS PTI device is able to receive well formatted SMS following market standards and then act as intended.

- ?>ASF– Matches the ACK SMS prototype that has to be sent to the Nokia E52 PTI device to remotly acknowledge the alarm state. Please send « ?>ASF » only in case of established manual, motion loss or verticality alarm cycle, it won't have any effect if phone is in idle state.

-In case of voluteer alert, if « ?>ASF » is sent to the E52 PTI GPS, the device will stop it's alert loop by itself and come back to idle state, ready for a normal use.

-In case of verticality alert, if « ?>ASF » is sent to the E52 PTI GPS, the device will stop it's alert loop by itself but it will continue to play a loud local alert in order to find the potentialy injuried person.
The phone can only bet set back to idle set by simple shutdown and restart cycle.

TIP : For all « ?>ASF » received in case of an effective alarm state, the E12 PTI GPS sends back the « ?>RSF » acknowledgement confirming that it has been taken in account. This communication log is conserved in E52's historic, this is readable in Administrator mode in case ones wants to get information about the origin of the manipulations.

- ?>GPO- Correspond au prototype SMS à envoyer au Nokia E52 PTI GPS pour connaître sa position, discrètement, à distance. Envoyer « ?>GPO » au E52 PTI GPS aura pour effet d'initier l'envoi d'un retour d'état à l'émetteur tel que :

?>POS_00/00/00_00:00:00_00/00/00_00:00:00_100%_E000.00.00,0_N00.00.00,0_0KM/H_0DEG_0M_0_0_0

Noter que la configuration « Smsgps+ » est requise pour cette fonctionnalité.

- !LOC- Correspond au prototype SMS à envoyer au Nokia E52 PTI GPS pour connaître sa position selon un autre format, silencieusement, à distance. Envoyer « !LOC » au E52 PTI GPS aura pour effet d'initier l'envoi d'un retour d'état à l'émetteur tel que :

!LOC_01/01_norm_100%_gps_1_N00.00.00,0_E000.00.00,0_00.00.0000_00:00:00_000km/h_000deg

Noter que la configuration « Smsgps+ » est requise pour cette fonctionnalité.

✓ Protocols :

For your information, here are the prototypes of the protocols used :

?>EMR_00/00/00_00:00:00_00/00/00_00:00:00_100%_E000.00.00,0_N00.00.00,0_0KM/H_0DEG_0M_0_0_0
?>POS_00/00/00_00:00:00_00/00/00_00:00:00_100%_E000.00.00,0_N00.00.00,0_0KM/H_0DEG_0M_0_0_0

?>type_GPSdate_GPShour_GSMdate_GSMhoue_Battery_Longitude_Latitude_Speed_Direction_Altitude_GPSstate_Satellites_Charger

Dates et Hours in UTC format
Battery level in percentages
GPSstate such as 1=Ok, 2=Old fix, 3=Error
Charger such as 0=On batteries, 1=In charge

Or

!EMG_01/01_emer_100%_gps_1_N00.00.00,0_E000.00.00,0_00.00.0000_00:00:00_000km/h_000deg
!LOC_01/01_norm_100%_gps_1_N00.00.00,0_E000.00.00,0_00.00.0000_00:00:00_000km/h_000deg

!type_Part_Priority_Battery_Format_Latitude_Longitude_GPSdate_GPShour_Speed_Direction

Dates et Hours in UTC format
Battery level in percentages

TIP : Depending on the operator that will handle the alarm informations, they would be forwarded into vocal message, SMS, mail, or even URL links to multiple recipients.

✓ Settings menu :

Depending on the fact that you are in Admin or Locked/Limited mode, the shortcut to the setting view varies a bit :

In Administrator mode : make a long press on the Menu (10) key a list will appear. Go to the process called DATI with the multidirectional cross and press on the central key (4).

In Locked/Limited mode : make a long press on the Menu (10) key, and hold it for around 5 seconds until the menu appears.

-Lock/Unlock the phone-
On « Mode » option, press on the central key (4) and then choose desired item according to the modes description in the hereby documentation. Fill the password fields and validate, a validation or error notification will then be displayed.

WARNING ! This code must be conserved at all cost, in cas it's lost, there is no remote procedure to unlock the phone. A birthdate is a good starting point to catch the trick. This code can be modified at any time via the steps following.

-GPS protocol-
In Admin mode : This parameter allows to select one of the three GPS formats sent by SMS in case if this option has been well set and an antenna (internal or external) is linked to the E52 PTI.

-GeoTheme-
In Admin mode : This parameter allows to validate or stop the theme automatic switch bounded to the GPS reception.

Theme is light brown when not covered by GPS.

Theme is white under usable GPS conditions.

-Verticality sensor-
In Admin mode : This parameter allows to validate or inhibit the Mand-Down sensor handling. In any case the manual alarm is remains available.

-Verticality timer-
In Admin mode : This parameter allow to vary the timer dedicated to the countdown prior to the display and sound notice throwed when a Man-Down situation is detected. From 15 to 60 seconds.

-Motion sensor-
In Admin mode : This parameter allows to validate or inhibit the motion loss sensor. In any case the manual alarm is remains available.

-Motion timer-
In Admin mode : This parameter allow to vary the timer dedicated to the countdown prior to the display and sound notice throwed when a motion less situation is detected. From 1 to 5 minutes.

-Language choice-
This parameter is automatic, if the global user interface of your E52 PTI is in French, the PTI software's layer will be in French, if any other language is selected in phone's general settings , the language will be in English (other languages will be added in future versions).

It's possible, providing you're in Administrator mode to reset the phone to its factory settings. Please mind to avoid to delete the DATI application in Nokia Application Manager if not desired.
This manipulation is fully volunteer (that is to say, the user have to confirm it) and is fully revertable but implies a return in our labs and a standard charge.

This product is in perpetual evolution, lots of enhancements will be available via update against a standart charge.

Alarm handling

- ***PTI in standard :*** ***Thanks to any display shipped with any phone.***
- ***PTI by a personal computer :*** ***Supervision with our Vigitél software.***
- ***GPS protocols :*** ***Specialised companies, please contact us for further informations.***
- ***GPS autonomous handling :*** ***Vigisat plug-in.***

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